AMENDMENTS TO THE CLAIMS

1-50. (Canceled)

51. (Currently amended) A microbattery, comprising:

a substrate;

a conductive layer comprising a transition metal element formed directly on a surface of the substrate;

a thin-film cathodic layer comprising a metal sulfide ~~of the metal element~~ electrochemically formed directly on the conductive layer by electrooxidation or electroreduction of the conductive layer;

a thin-film electrolyte layer formed directly on the cathodic layer; and

a thin-film anodic layer formed directly on the electrolyte layer.

52. (Currently amended) The microbattery according to claim 51, wherein the transition metal element is copper, and the cathodic layer comprises copper sulfide electrooxidized onto the copper.

53. (Previously presented) The microbattery according to claim 51, wherein the cathodic layer has a thickness between 1 and 3 μm.

54. (Previously presented) The microbattery according to claim 51, wherein the substrate comprises a semiconductor material.

55. (Previously presented) The microbattery according to claim 51, wherein the substrate has a plurality of cavities, and wherein the conductive and thin film layers are formed on an inner surface of the cavities.

56. (Canceled)

57. (New) The microbattery according to claim 51, wherein the transition metal element is selected from a group of elements consisting of Cu, Ni, Co, Fe, Au, Ag, Pd, and Pt.

58. (New) The microbattery according to claim 51, wherein the metal sulfide is selected from a group of compounds consisting of sulfides of Cu, Mo, Co and W.